

**REMARKS**

I. Claim rejections under 35 U.S.C. § 103 based on Frank and Mazess.

Claims 1, 2, 6-8, 46, and 57 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,841,833 (Mazess) in view of U.S. Patent No. 6,445,765 (Frank). Claims 9, 11, 13-16, and 56 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mazess in view of Frank and U.S. Publication 2004/0057556 (Luhta).

Claims 1 and 9

Claim 1 recites that the first and second scintillating materials for respective first and second imaging elements of *a detector assembly* have *different compositions* (Emphasis Added). Claim 9 recites similar limitations regarding different compositions. Mazess and Frank do not disclose or suggest such limitations. Rather, Mazess discloses high energy detector 37(a) and low energy detector 37(b) that are made from respective separate materials 308, 312 having the *same* composition. Applicant certainly agrees with the Examiner on pages 2-3 of the Office Action that Mazess discloses detectors with different thicknesses. In particular, in Mazess, the difference in energy detectors 37(a), 37(b) is achieved by varying the thickness of the material that is used to form the detectors (as indicated by the same type of shading in figures 22, 23), and not by using different materials with different compositions. Also, note that while Mazess discloses that another different material (for forming both the detectors with different thicknesses) may be used in other embodiments, Mazess does not describe that detector 37(a) has a different composition from detector 37(b) on a same detector assembly.

Applicant understands that the Examiner is relying on Frank to make up the above deficiency presents in Mazess. In particular, according to page 3 of the Office Action, Frank allegedly shows that using different materials are equivalent to using different thicknesses of materials for forming a detector (and therefore purportedly provides the reason for changing the different detector thicknesses of Mazess with different compositions). However, Applicant believes that this is a mischaracterization of Frank. This is because Frank actually describes two detectors 5, 6 arranged in a front-to-back configuration. Frank describes that detector 6 with material 9 having atomic number of more than 60 has a thickness of 1-2 mm, and that detector 5

with material 8 having atomic number of 30-40 has a thickness of 0.2-1 mm (column 3, line 64 to column 4, line 11). Thus, Frank specifically describes that certain detector material be formed to have certain specific thickness to provide the detector, and clearly does not describe that different detector materials are substitute for different detector thicknesses, as purported in the Office Action. For at least the foregoing reasons, claims 1 and 9, and their respective dependent claims, should be allowable over Mazess, Frank, and their purported combination.

Also, as previously discussed, Frank actually fails to show different imaging elements of a same detector assembly/panel be made from different materials with different compositions. In particular, Frank discloses that *two* separate detector assemblies (i.e., not “a” same detector assembly, as recited in claim 1) can have different respective chemical compositions (column 1, lines 10-24), but does not disclose or suggest that different imaging elements in a detector assembly (e.g., either one of the two detector assemblies) be made from different materials. Since Mazess discloses that different imaging elements in a same detector assembly are made from a same material, and Frank discloses that two separate detector assemblies can have different respective materials, their combination clearly does not, and cannot, result in a detector assembly/panel having different imaging elements formed from different compositions. Thus, the combined teachings of Mazess and Frank could not have suggested to those of ordinary skill in the art of the subject matter of claims 1 and 9.

#### Claim 57

Claim 57 recites that one of the first imaging elements including the *first scintillating material* and one of the second imaging elements including the *second scintillating material* are configured to *receive radiation simultaneously*, wherein the first and second scintillating materials have different compositions (Emphasis Added). Mazess and Frank also do not disclose or suggest the above limitations. According to page 9 of the Office Action, figure 22 of Mazess discloses imaging elements that are configured to receive radiation simultaneously. However, Applicant respectfully notes that the imaging elements in the figure 22 of Mazess have a same material composition. Thus, figure 22 of Mazess does not disclose or suggest different scintillating materials with different compositions that are configured to receive radiation simultaneously.

Also, to the extent that the Examiner is only relying on Mazess for the “simultaneous receiving radiation” feature, and is relying on Frank for the purported disclosure of different

compositions, Applicant respectfully notes that such mapping of elements from Mazess and Frank to the claim limitations is improper. This is because, as discussed, Frank specifically teaches two detectors 5, 6 that are arranged in a front-to-back configuration (figure 1), whereby radiation is received serially one after the other. Thus, Frank in fact *teaches away* from two imaging elements with different materials that are configured to receive radiation simultaneously. Note that a reference cannot be used in a combination to sustain a claim rejection under § 103 if the reference teaches away from a claimed feature. In this case, because Frank actually teaches away from the claimed feature regarding simultaneously receiving radiation, it cannot be combined with Mazess (even if Mazess is relied upon for only the “simultaneously receiving radiation” feature) to form any prima facie case of any § 103 rejections. For these additional reasons, claim 57 should be allowable.

II. Claim rejections under 35 U.S.C. § 103 based on Bogatu, Luhta, Barnes, and Mazess II.

Claims 4, 5, 9, 18-22, 26-28, 41, 45, 47-55, and 59 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Publication No. 2002/0191751 (Bogatu) and Luhta in view of U.S. Patent No. 5,138,167 (Barnes) and U.S. Publication 2002/0191738 (Mazess II).

Claim 18

Claim 18 recites that the plurality of *first photoconductor elements* and the plurality of *second photoconductor elements form a surface* (Emphasis Added). Claims 9, 41, and 52 describe similar features regarding different imaging elements forming a surface. Applicant agrees with the Examiner that Bogatu does not disclose an imaging layer having different imaging elements.

According to page 5 of the Office Action, Barnes is being relied upon for the alleged disclosure of different semiconductor materials, and therefore, it would have been allegedly obvious to modify Bogatu to include different semiconductors as that taught by Barnes in view of Mazess II. However, Applicant respectfully notes that Barnes specifically teaches providing two layers of detector elements (i.e., to form a “front and rear” configuration - see column 11, line 52, and figure 2) so that low energy is absorbed by the first layer, and high energy is transmitted through the first layer and absorbed by the second layer (column 4, line 67 to column 5, line 4). Since Barnes specifically teaches providing two detectors in stacked configuration,

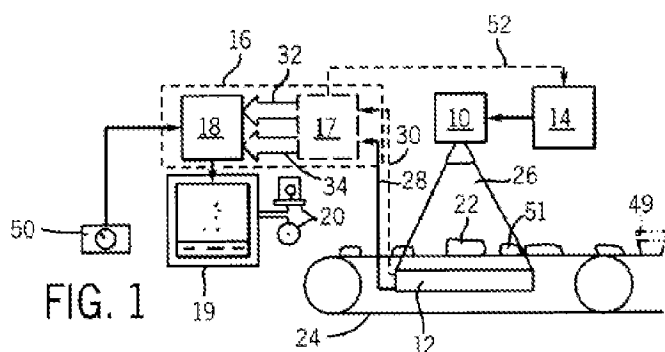
Barnes in fact *teaches away* from the claimed subject matter, and one skilled in the art would not be motivated to combine Bogatu and Barnes in the manner described in the Office Action (even in view of Mazess II). Note that a prima facie case of a § 103 rejection cannot be established if a cited reference *teaches away* from the claimed subject matter. For at least the foregoing reasons, Applicant respectfully requests that the § 103 rejections be withdrawn.

Also, according to page 5 of the Office Action, Bogatu allegedly discloses enhancing the contrast and spatial resolution of an image, and one skilled in the art allegedly knows that it is well known that a dual energy side-by-side detector reduces the possibility of motion artifacts and of edge artifacts, which will also enhance the contrast and spatial resolution of the image. However, Applicant submits that Bogatu's disclosure of enhancing contrast and spatial resolution of an image cannot be the motivation to use "a dual energy side-by-side detector." This is because placing different energy detectors in a side-by-side configuration would actually result in only parts of the detector being used for imaging for a given imaging energy (i.e., not all of the imaging elements can be used because they react to different imaging energies). Thus, Bogatu's disclosure of enhancing contrast and spatial resolution of an image actually discourages one skilled in the art in (and therefore teaches away from) placing imaging elements with different imaging characteristics in a side-by-side configuration. For these additional reasons, Applicant respectfully requests that the § 103 rejections be withdrawn.

Furthermore, according to pages 5-6 and 12 of the Office Action, Mazess II allegedly discloses a side-by-side configuration, and therefore, it would be allegedly obvious to use the different detector materials of Barnes in the detector of Bogatu in view of MazessII. However, the so-called "side-by-side" configuration of Mazess II is actually another variation of a stacked configuration (like that shown in Barnes). This is evidenced from column 7, lines 55-58 of Mazess II, which states:

Specifically, in the side-by-side arrangement, two rows of detector elements are placed side-by-side *in an orientation perpendicular to the direction the meat samples 22 are traveling.*

(Emphasis Added)



Notably, as shown in figure 1, the direction that is *perpendicular* to the traveling direction of object 22 is along the axis of the beam 26. Thus, in the so-called “side-by-side” configuration of Mazess II, the detector elements are arranged at different distances away from the radiation source 10 (which is similar to the stacked configuration of Barnes). Therefore, in view of Mazess II, the purported combined teaching of Bogatu, Barnes, and Mazess II clearly does not disclose or suggest selecting a material from the first layer 26 of Barnes, selecting a material from another layer 28 of Barnes, and placing them on the same layer 22’ of Bogatu. For these additional reasons, Applicant respectfully requests that the § 103 rejections be withdrawn.

#### Claim 59

Claim 59 recites that one of the first photoconductor elements and one of the second photoconductor elements are configured to receive radiation simultaneously. Bogatu and Barnes also do not disclose or suggest the above limitations. Rather, as discussed, Barnes specifically teaches two detectors that are arranged in a front-to-back configuration (figure 2), whereby radiation is received serially one after the other. Thus, Barnes in fact *teaches away* from two imaging elements with different materials that are configured to receive radiation simultaneously. Note that a reference cannot be used in a combination to sustain a claim rejection under § 103 if the reference *teaches away* from a claimed feature.

Also, as discussed, the so-called “side-by-side” configuration of Mazess II actually involves placing different detector elements that are at different distances from the radiation source. Thus, Mazess II’s detector assembly with the side-by-side configuration does not and cannot allow the different detector elements to receive radiation simultaneously. For these additional reasons, claim 59 should be allowable.

III. Claim rejections under 35 U.S.C. § 103 based on Bogatu, Luhta, and Maekawa.

Claims 29, 31, 32, 34, 35, 37, 38, and 40 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bogatu and Luhta in view of EP 1016881 (Mackawa). These claims have been canceled, thereby rendering the § 103 rejections moot.

**CONCLUSION**

Based on the foregoing, all claims are believed in condition for allowance. If the Examiner has any questions or comments regarding this amendment, please contact the undersigned at the number listed below.

Applicant(s) hereby explicitly retracts and rescinds any and all of the arguments and disclaimers presented to distinguish the prior art of record during the prosecution of all parent and related application(s)/patent(s), and respectfully requests that the Examiner re-visit the prior art that such arguments and disclaimers were made to avoid.

The Commissioner is authorized to charge any fees due in connection with the filing of this document to Vista IP Law Group's Deposit Account No. **50-1105**, referencing billing number **VM 03-036-US**. The Commissioner is authorized to credit any overpayment or to charge any underpayment to Vista IP Law Group's Deposit Account No. **50-1105**, referencing billing number **VM 03-036-US**.

Respectfully submitted,

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